

WHAT IS CLAIMED IS

1. A computer system comprising:

a message sending/receiving means for transferring a series of messages based on an application,

a service layer for providing a specific additional service to the application in accordance with a policy of specific control or instructions to each message,

a policy manager for holding and centrally managing various policies and supplying a policy corresponding to a message in accordance with a request for acquisition from the service layer, and

a communication layer for transferring messages given the service by the service layer in accordance with the policy with the application of the other party, wherein

the service layer is provided with

an analyzing means for extracting the parameters described in a message for specifying the message, while dividing it into static parameters not changing over a relatively long period and dynamic parameters changing over a relatively short period and

a requesting means for requesting the acquisition of a group of policies allocated to the static parameters from the policy manager using the extracted static parameters.

2. A computer system as set forth in claim 1, wherein the policy manager has a response function unit for generating a policy cluster and returning it to the requesting means when receiving a request for acquisition using static parameters from the requesting means, the policy cluster being comprised of at least a group of policies corresponding to overall parameters comprised of the static parameters and various changing dynamic parameters and policy allocation rules indicating the allocations of the group of policies corresponding to the

overall parameters.

3. A computer system as set forth in claim 2, wherein

said requesting means has a policy cache function unit,

the policy cache function unit temporarily stores in a readable manner the above policy cluster returned from the policy manager, and,

after the start of the transfer of a message, when a policy cluster allocated to the overall parameters sent is stored in the policy cache function unit, the corresponding policy is acquired from there.

4. A computer system as set forth in claim 3, wherein said requesting means has in the policy cache function unit a negotiation completion flag area for displaying that agreement has been reached when negotiating in advance with the service layer of the other party supporting the application of the other party and reaching agreement on the policy to be used between the two.

5. A computer system as set forth in claim 4, wherein said policy manager stores in said policy cluster a negotiation completion tag for displaying that agreement has been reached when negotiating in advance with the policy manager of the other party supporting the application of the other party and reaching agreement on the policy to be used between the two.

6. A computer system as set forth in claim 2, wherein said policy manager has a signature function unit for generating a signature guaranteeing that the content of the policy cluster is legitimate.

7. A computer system as set forth in claim 5, wherein said requesting means has a negotiation function unit which uses the negotiation completion tag displayed in a policy cluster to confirm the legitimacy of the negotiation completion tag in advance with the service layer of the other party when acquiring a policy cluster

from the policy manager and wherein the negotiation function unit negotiates for a plurality of policies included in the policy cluster all together.

8. A computer system as set forth in claim 6, wherein said requesting means has a signature verification function unit for verifying that the signature displayed in the policy cluster is legitimate when acquiring a policy cluster from the policy manager.

9. A service layer for providing a specific additional service in accordance with a policy to a series of messages transferred based on the application while contacting an outside policy manager,

said service layer comprising:

an analyzing means for extracting from a message, for specifying it, parameters described in the message, while dividing it into static parameters not changing over a relatively long period and dynamic parameters changing over a relatively short period and

a requesting means for requesting from the policy manager the acquisition of a group of policies allocated to the static parameters by using the extracted static parameters.

10. A service layer as set forth in claim 9, further comprising a controlling means for executing an additional service in accordance with a policy.

11. A service layer as set forth in claim 9, wherein said analyzing means is comprised of a static parameter analyzing function unit for extracting static parameters and a dynamic parameter analyzing function unit for extracting dynamic parameters.

12. A service layer as set forth in claim 9, wherein said requesting means has a policy acquisition function unit for acquiring a group of policies allocated from the policy manager to the static parameters using the static parameters described in a message sent to the application of the other party.

13. A service layer as set forth in claim 12,

wherein said requesting means has a policy cache function unit for temporarily storing in a readable manner the group of policies acquired from the policy acquisition function unit.

14. A service layer as set forth in claim 13, wherein said requesting means has a negotiation function unit for negotiating for agreement between the two parties regarding the policy to be used with the service layer of the other party supporting the application of the other party for each policy of a group of policies acquired from the policy manager or the policy cache function unit.

15. A service layer as set forth in claim 13, wherein said requesting means has a signature verification function unit for verifying if a signature described for a group of policies acquired from the policy manager or from the policy cache function unit is legitimate.

16. A policy cache function unit provided in a service layer providing a specific additional service in accordance with a policy to a series of messages transferred based on an application while contacting an external policy manager,

said policy cache function unit comprising  
a cache memory for acquiring from the policy manager and temporarily storing one or more policies for specific control or instructions to the messages,

a policy cache table recording memory addresses in the cache memory storing the policies in correspondence with the policies, and

an allocation rule cache table for establishing allocation rules of policies for the parameters described in a message so as to specify the message.

17. A policy cache function unit as set forth in claim 16, wherein said allocation rule cache table

negotiates in advance with the service layer supporting the application of the other party transferring the message and includes a negotiation completion flag area for displaying that agreement has been reached on the policies recorded in the allocation rule cache table when agreement is reached on the policies to be used between the two.

18. A policy manager for contacting a service layer providing a specific additional service for a series of messages transferred based on an application and supplies to this service layer one or more policies for specific control or instructions to the messages,

said policy manager having a response function unit for generating a policy cluster and returning it to the service layer when acquisition of a policy is requested by the service layer by static parameters among parameters described in a message for specifying the message divided into static parameters not changing over a relatively long period and dynamic parameters changing over a relatively short time and

said policy cluster comprised of at least a group of policies corresponding to the overall parameters comprised of static parameters and various changing dynamic parameters and policy allocation rules showing the allocation of each of the group of policies with respect to each of the overall parameters.

19. A policy manager as set forth in claim 18, further comprising an advance negotiation function unit which negotiates in advance with the policy manager of the other party supporting the application of the other party transferring the message and generates a negotiation completion tag for recording the fact of agreement in the policy cluster when the two reach agreement on the policy to be used.

20. A policy manager as set forth in claim 18, further comprising a signature function unit for generating a signature for guaranteeing that the content

of the policy cluster is legitimate.